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Decimal Place Names

DPV 0

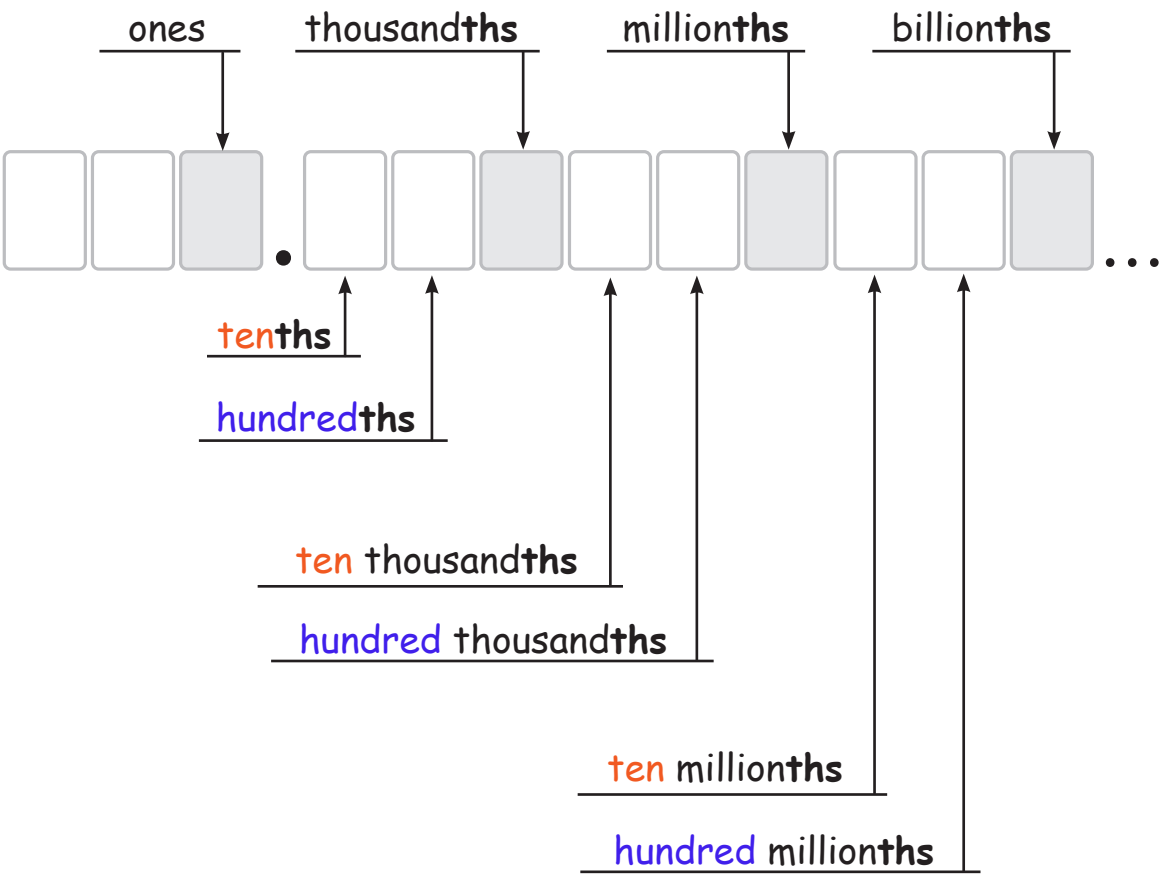
The Decimal Place Names aren't said out loud as often as the number places for whole numbers. That's because when reading a decimal number, it's common to just say "point" followed by the sequence of decimal digits in order from largest to smallest. For example, to say the numerical value of Pi to 5 decimal places (3.14159) you'd simply say, "three point one four one five nine".

But it's still very helpful to learn some of the Decimal Place Names and it's especially important to know the names of the first three decimal places; tenths, hundredths and thousandths. The chart below will help you learn their names. Use it as a reference when doing the rest of the worksheets.

Notice that the pattern for Decimal Place Names is similar to the pattern for the whole numbers that you learned about in the last lesson. (Compare this page to the first page of the last worksheet packet to see for yourself.) But all of the names end with the letters "**ths**" to indicate that they represent fractional amounts.

With decimal digits, the "periods" of three digits aren't typically separated by commas like they are with whole numbers.

And just like the whole number places, the decimal places continue on forever, but to the right instead of the left. And the further they are to the right, the smaller the amount they represent.



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Identifying Decimal Number Places

DPV 1

Instructions: Use your knowledge of number place names to identify the digits asked for in each problem below.

1. 34.285
   - What digit is in the tens place? 3
   - What digit is in the tenths place? 2

2. 1.067
   - What digit is in the tenths place? 0
   - What digit is in the hundredths place? 6

3. 410.528
   - What digit is in the tenths place? 5
   - What digit is in the thousandths place? 8

4. 3.74195
   - What digit is in the hundredths place? 4
   - What digit is in the ten-thousandths place? 9

5. 52.37486
   - What digit is in the tenths place? 3
   - What digit is in the hundred-thousandths place? 6

6. 196.7258
   - What digit is in the hundreds place? 1
   - What digit is in the hundredths place? 2

7. 7.439185
   - What digit is in the ones place? 7
   - What digit is in the millionths place? 5

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Invisible Decimal Number Places

DPV 2

Instructions: Number places are usually invisible, so you need to be able to identify the digits they contain even when they are not shown. For each multi-digit number below, circle the digit that is in the number place listed.

1. tenths place
   42.35
2. thousandths place
   521.849
3. ones place
   43.20675
4. hundreds place
   8,461.250
5. hundredth place
   789.520
6. tens place
   12.059438
7. tenths place
   745.6
8. ten-thousandths place
   54.16925
9. hundreds place
   2,310.5794
10. millionths place
    843.010854
11. hundredths place
    6,351.33
12. hundred-thousandths place
    5,106.300782 4
13. thousandths place
    1.156 27886
14. ones place
    42.626
15. thousands place
    9,426.37294218
16. tenths place
    3.63280207

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Place Value with Decimals

DPV 3

Instructions: Remember that a digit's place determines its value as you answer the questions below.

1. What is the place value of the digit '2' in this number?
   16.275 — 2/10

2. What is the place value of the digit '4' in this number?
   3.141 — 4/100

3. What is the place value of the digit '9' in this number?
   350.97 — 9/10

4. What is the place value of the digit '7' in this number?
   75.8 — 70

5. What is the place value of the digit '1' in this number?
   0.73194 — 1/1,000

6. What is the place value of the digit '8' in this number?
   5.2814 — 8/100

7. What is the place value of the digit '3' in this number?
   1,350.76 — 300

8. What is the place value of the digit '7' in this number?
   50.328716 — 7/10,000

9. What is the place value of the digit '5' in this number?
   24.5003 — 5/10

10. What is the place value of the digit '9' in this number?
    9,342.12 — 9,000

11. What is the place value of the digit '4' in this number?
    10.0472 — 4/100

12. What is the place value of the digit '5' in this number?
    12.938657 — 5/100,000

13. What is the place value of the digit '8' in this number?
    178.53 — 8

14. What is the place value of the digit '6' in this number?
    29.168 — 6/100

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Expanded Form with Decimals

DPV 4

Instructions: Use what you learned in the video to write these numbers in expanded form.

1. 153.427 — $100 + 50 + 3 + \frac{4}{10} + \frac{2}{100} + \frac{7}{1,000}$
2. 24.75 — $20 + 4 + \frac{7}{10} + \frac{5}{100}$
3. 5.609 — $5 + \frac{6}{10} + \frac{9}{1,000}$
4. 0.1234 — $\frac{1}{10} + \frac{2}{100} + \frac{3}{1,000} + \frac{4}{10,000}$
5. 5,822.3 — $5,000 + 800 + 20 + 2 + \frac{3}{10}$
6. 39.054 — $30 + 9 + \frac{5}{100} + \frac{4}{1,000}$
7. 604.855 — $600 + 4 + \frac{8}{10} + \frac{5}{100} + \frac{5}{1,000}$
8. 9.83924 — $9 + \frac{8}{10} + \frac{3}{100} + \frac{9}{1,000} + \frac{2}{10,000} + \frac{4}{100,000}$
9. 0.202 — $\frac{2}{10} + \frac{2}{1,000}$
10. 550.346 — $500 + 50 + \frac{3}{10} + \frac{4}{100} + \frac{6}{1,000}$
11. 0.05203 — $\frac{5}{100} + \frac{2}{1,000} + \frac{3}{100,000}$
12. 473.625 — $400 + 70 + 3 + \frac{6}{10} + \frac{2}{100} + \frac{5}{1,000}$

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